10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# CBLB Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8668c

## Product Information

| | |
|---|---|
| **Application** | WB, IHC-P, FC, E |
| **Primary Accession** | Q13191 |
| **Other Accession** | Q8K4S7, Q3TTA7, Q6NRE7 |
| **Reactivity** | Human, Rat, Mouse |
| **Predicted** | Xenopus, Mouse, Rat, Bovine, Canine, Rabbit, Chicken |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB21574 |
| **Calculated MW** | 109450 |
| **Antigen Region** | 103-130 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 868 |
| **Other Names** | E3 ubiquitin-protein ligase CBL-B, 632-, Casitas B-lineage lymphoma proto-oncogene b, RING finger protein 56, SH3-binding protein CBL-B, Signal transduction protein CBL-B, CBLB, RNF56 |
| **Target/Specificity** | This CBLB antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 103-130 amino acids from the Central region of human CBLB. |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | CBLB Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

| | |
|---|---|
| **Name** | CBLB |

| | |
|---|---|
| **Synonyms** | RNF56 |
| **Function** | E3 ubiquitin-protein ligase which accepts ubiquitin from specific E2 ubiquitin-conjugating enzymes, and transfers it to substrates, generally promoting their degradation by the proteasome (PubMed:20525694, PubMed:40101708). Negatively regulates TCR (T-cell receptor), BCR (B-cell receptor) and FCER1 (high affinity immunoglobulin epsilon receptor) signal transduction pathways (PubMed:40101708). In naive T-cells, inhibits VAV1 activation upon TCR engagement and imposes a requirement for CD28 costimulation for proliferation and IL-2 production (By similarity). Also acts by promoting PIK3R1/p85 ubiquitination, which impairs its recruitment to the TCR and subsequent activation (PubMed:11087752, PubMed:11526404). In activated T-cells, inhibits PLCG1 activation and calcium mobilization upon restimulation and promotes anergy (By similarity). Involved in LAG3-mediated inhibition of TCR signaling: following ligand-binding to LAG3, catalyzes 'Lys-63'-linked ubiquitination of LAG3, unleashing the LAG3 C-terminus from the membrane, and initiating a signaling that prevents TCR activation (PubMed:39030301, PubMed:40101708). In B-cells, acts by ubiquitinating SYK and promoting its proteasomal degradation (By similarity). Slightly promotes SRC ubiquitination (PubMed:14661060). May be involved in EGFR ubiquitination and internalization (PubMed:10086340). May be functionally coupled with the E2 ubiquitin-protein ligase UB2D3. In association with CBL, required for proper feedback inhibition of ciliary platelet-derived growth factor receptor-alpha (PDGFRA) signaling pathway via ubiquitination and internalization of PDGFRA (By similarity). |
| **Cellular Location** | Cytoplasm. Note=Upon EGF stimulation, associates with endocytic vesicles |
| **Tissue Location** | Expressed in placenta, heart, lung, kidney, spleen, ovary and testis, as well as fetal brain and liver and hematopoietic cell lines, but not in adult brain, liver, pancreas, salivary gland, or skeletal muscle. Present in lymphocytes (at protein level) |

## Background

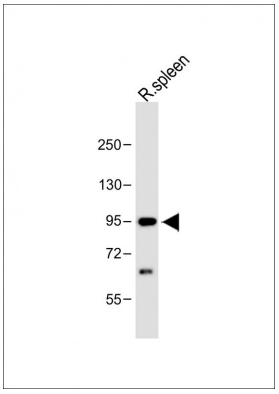
E3 ubiquitin-protein ligase which accepts ubiquitin from specific E2 ubiquitin-conjugating enzymes, and transfers it to substrates, generally promoting their degradation by the proteasome. Negatively regulates TCR (T-cell receptor), BCR (B-cell receptor) and FCER1 (high affinity immunoglobulin epsilon receptor) signal transduction pathways. In naive T-cells, inhibits VAV1 activation upon TCR engagement and imposes a requirement for CD28 costimulation for proliferation and IL-2 production. It also acts by promoting PIK3R1/p85 ubiquitination, which impairs its recruitment to the TCR and subsequent activation. In activated T-cells, inhibits PLCG1 activation and calcium mobilization upon restimulation and promotes anergy. In B-cells, acts by ubiquitinating SYK and promoting its proteasomal degradation. It may also be involved in EGFR ubiquitination and internalization.

## References

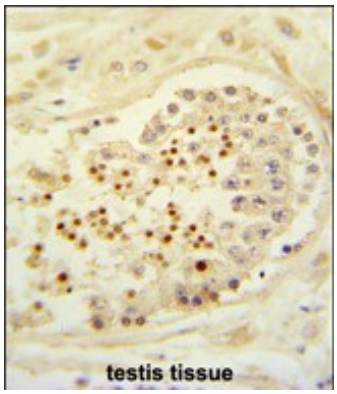
Lavagna-Sevenier,C., et.al., J. Biol. Chem. 273 (24), 14962-14967 (1998)
Yokoi,N., et.al., Biochem. Biophys. Res. Commun. 368 (1), 37-42 (2008)

## Images

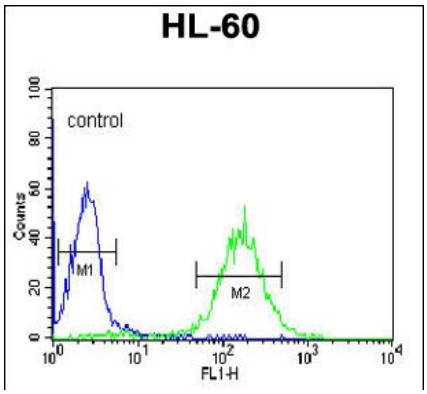
Anti-CBLB Antibody (Center) at 1:1000 dilution + Rat spleen whole tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 109




kDa Blocking/Dilution buffer: 5% NFDM/TBST.




Formalin-fixed and paraffin-embedded human testis tissue reacted with CBLB Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.




CBLB Antibody (Center) (Cat. #AP8668c) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.